

Nanogram Levels Enabling Learning Objective

**Given a scenario determine if one
Soldier is more positive than
another.**



DoD Established Cutoffs for Confirmed Positive Results

- DoD established the cutoff level for each drug that the lab tests for. Some of the levels were set based on scientific study, while others were based on technology from 20 years ago.**
- Regardless of how the cutoff was set, any specimen that tests below the cutoff level is reported as negative. For example the cutoff for Cocaine is 100 ng/mL, so if a specimen result is 99 ng/mL then it is reported as a negative specimen.**



DoD Established Cutoffs for Confirmed Positive Results

- ▣ The nanogram (ng/mL) levels are reported to the IBTC or ADCO when the results are reported by the laboratory. The nanogram level on a positive specimen for THC does not necessarily indicate how much marijuana a Soldier used.**
- ▣ The fact that the urine contains a drug or metabolite in excess of the DoD cutoff makes a specimen positive - not the amount the Soldier went over the cutoff.**



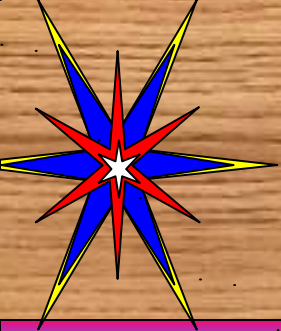
DoD Established Cutoffs for Confirmed Positive Results

- ▣ **A 150 ng/mL THC level is not “more positive” nor does it indicate that the Soldier used more marijuana than another Soldier who is positive at 15 ng/mL. What you don’t know is:**
 - ▣ **how long ago each Soldier used the drug; was it the 8 hours before the urinalysis or 30 hours before the urinalysis.**
 - ▣ **each Soldier’s metabolism- does this Soldier metabolize THC more quickly than the other Soldier.**



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- ▣ **What you don't know is:**
 - ▣ **how much water each Soldier drank prior to providing a specimen. One Soldier may have provided his/her first morning specimen while the other Soldier drank water for 3 hours before providing a very clear specimen.**
 - ▣ **how was the Marijuana ingested; was it eaten in brownies or smoked in a joint?**
 - ▣ **how potent (THC Concentration) was the marijuana used**
- ▣ **You DO KNOW that both Soldiers used illegal drugs.**



DoD Established Cutoffs

<u>DRUG</u>	<u>CONFIRMATION (ng/mL)</u>
Amphetamines	500
Barbiturates (prior to Jun 05)	200
THC	15
Cocaine (Benzoylecgonine)	100
Lysergic Acid Diethylamide (LSD)	0.2
Opiates (Codeine)	2000
(Morphine)	4000
Synthetic Opiates (Oxycodone)	100
(Oxymorphone)	100
Heroin (6-Acetylmorphine)	10
Phencyclidine (PCP)	25